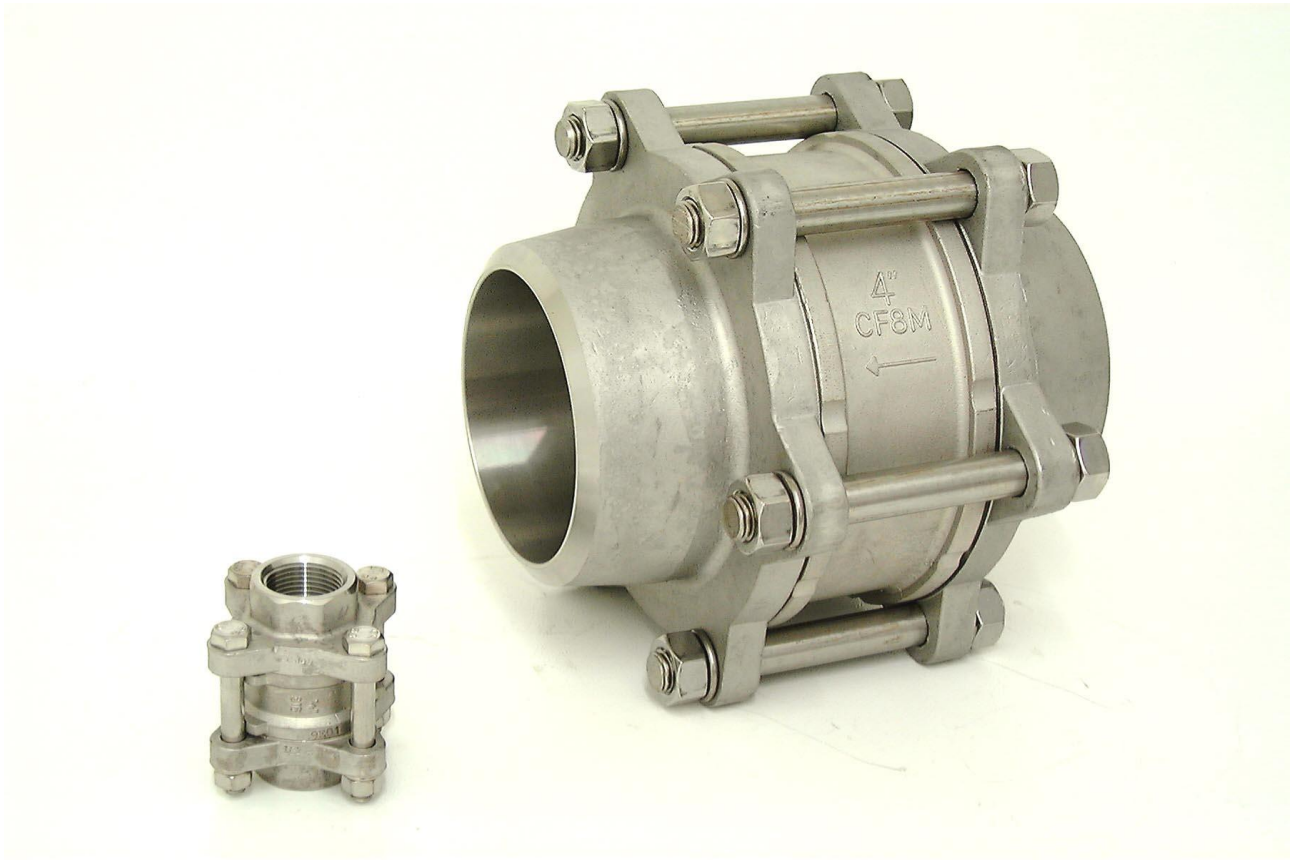

TYPE 6000

DESCRIPTION

1. General Precautions

a. Material Selection:

The possibility of material deterioration in service and the need for periodic inspections is depended on the contained fluid. Carbide phase conversion to graphite, oxidation of ferrite materials, decrease in ductility of carbon steels at low temperature (even in applications above -29℃) are among those items. For information about corrosion, the user is requested to take attention or consideration to determine the suitability of material in their application.

b. Pressure-Temperature rating:

The Pressure-Temperature rating is considered for static pressure. Please refer to P & T rating section on page 4 for working precaution. The allowable temperature is between -20℃ and 160℃ do not exceed the temperature range to avoid danger accident happen.

c. Fire safe condition:

Generally, the application of the valve shall comply with the Pressure-Temperature rating range. If the risk of fire is major effect, user is recommended to select our fire-safe products, which with API-607 approval. Contact to the valve distributor or manufacturer for details.

d. Liquids with high fluid velocity:

When valves must be operated frequently on liquids with very high velocity, a check shall be made with the valve distributor or manufacturer for appropriate advice to minimize the possibility of seat deformation, especially when they are highly pressurized on high-temperature line.

e. Throttling service: Valves are generally not recommended for throttling service, where both the fluid flow and the solid particles can damage or deform the resilient seats causing leakage. High fluid velocity or the presence of solid particles in suspension will further reduce seat life in throttling applications.

f. Do not disassembly when bearing pressure. Valve is not equipped with pressure access device. User should check it by other method through its piping system.

g. Do not touch the valve surface on high temperature.

h. Not allowed for unstable fluid, otherwise specified with catogory III in Declaration of conformity or/and in this user manual.

2. Product Description

2.1 3-PC SPRING LOADED CHECK VALVE

a. Valve in which the obturator movement is linear and, in the seating area, at right angle to the direction of flow.
b. The 3-PC SPRING LOADED CHECK VALVE are used to check and control liquid media, e.g. sewage and wastewater, where the media has solid matter volume of more than 5%, a free flow is required for operational safety reason.

2.2 Product specification

This operation manual cover the scope of product specifications are as following

PN	Category I	Category II
63	DN 15, 20, 25	DN 32, 40, 50, 65, 80, 100

S.E.P. mean sound engineering practice, such spec. will not be labeled with CE mark.

3. Technical standard or Code applied

Items	Standards/Codes
Product Designation	prEN 12516-3
Pressure-Temperature Rating	prEN 12516-1
Testing	prEN 12266-1
Material	EN 10213-4

4. Pressure Temperature Ratings

The pressure-temperature rating of 3-PC SPRING LOADED CHECK VALVE are determined.the choice is limited by the characteristics of the service fluid, temperature, pressure, velocity of fluid, frequency of valves operation and sizes of valves etc, Followings are the general rating charts for non-shock fluid service for 3-PC SPRING LOADED CHECK VALVES distinguished by nominal pressure and seating materials.

PRESSURE & TEMPERATURE RATING

Temperature (℃)	Working Pressure (bar)
RT	61.2
50	58.2
100	52.2
150	47.2
160	46.0

5. Delivery Condition and Storage

Valves are deliveried with packing

Valves must store in an indoor warehouse to avoid dusts and other foreign object, do not exposed in an open space without to put a cover over or take off the packing under an unnecessary situation.

6. Installation

6.1 Cleaning

Even the valves was transported under a clean environment, operator must check is there any foreign body or dusts inside the bore. If yes, clean it before installation. Operator clean the valves by water, compression air, or steam For cleaning operation, first step is put the valve bore perpendicular to the ground and clean, ensure all the dusts can be removed from the bore. The second step is checking and clean all the connecting pipe bore and connection area. No flush, rust and foreign bodies allow to avoid the blocking and leakage.

6.2 Valve Installation (Install to the pipeline system)

a. Direction

Follow the indication on valve body or name plate.

b. Fittings

Select the correct specification of flange to fit it to the pipeline, In comply with the valve size. Selection of blot is according to the flange specification. Please refer to information or technical document concerning flange end.

To tight the bolts of the flange end caps, the force must distribute on the every single bolt evenly. The order to tight the bolts need to install symmetrically. See the drawings below.

Please see the drawings below for the order of bolts installation.

6.3 Torque Body Bolts

Dimension		Bolts Nm
DN 15	1/2"	11
DN 20	3/4"	14
DN 25	1”	19
DN 32	1 1/4"	22
DN 40	1 1/2"	37
DN 50	2”	41
DN 65	2 1/2"	46
DN 80	3”	48
DN 100	4”	54

7. Put into service

7.1 Once pipe installation is completed, Check the pipe line system to ensure the Function of the valve.

7.2 Before delivery, valves are tested 1.5 times the allowable pressure at ambient temperature in open position. After installation, the piping system may subject to system tests, as condition not to exceed the above mentioned pressure.

8. Operation

Generally the valve have counter current stop function. Allow fluid flow through in indicated direction, and not colose the disc to counter current.

9. Dangers of inappropriate use

Never uses the product exceed its allowed condition, such as pressure, temperature and fluid.
In the case of any inappropriate use, the product was damage however there is no signal occurs immediately. User shall change the product to avoid danger in the future.

10. Maintenance

10.1 Maintenance frequency
The maintenance frequency is determined upon the application of valve. User shall consider the maintenance time interval depend on the kinds of fluid, flow velocity, operation frequency, high-pressure and high-temperature effect etc.

10.2 Check the surface of disc is it scraped?

10.3 Assembly
For assembly process, it takes the opposite way of dismantle process. The disc must in the close open position during assembling the body and cap.
To make sure the correct assembly, after tightening, user shall operate the valve several

MATERIALS

NO.	DESCRIPTION	MATERIALS
1	BODY	CF8M
2	END CAP	CF8M
3	DISC	AISI 316
4	SPRING	AISI 316
5	INSERT	CF8M
6	BOLT	AISI 304
7	BOLT NUT	AISI 304
8	BOLT WASHER	AISI 304
9	JOINT GASKET	PTFE
10	SCREW	AISI 304
11	CAP	AISI 316